REMARKS

Claim rejections under 35 USC 103

Claims 1, 3-5, 7-8, 11-13, 15-17, and 19 as to Ishii in view of another reference

Claims 1, 3-5,7-8, 11-13, 15-17, and 19 have been rejected under 35 USC 103(a) as being unpatentable over Ishii (5,571,366) in view of Taniguchi (5,489,192), Somekh (5,643,366), or Brors (EP 0276061). Claims 1 and 12 are independent claims, from which the other of these claims that have not been cancelled ultimately depend. Applicant has amended claims 1 and 12 to better clarify their subject inventions, and submits that as amended, claims 1 and 12 are not obvious over Ishii in view of Taniguchi, Somekh, or Brors. Applicant therefore now specifically discusses the patentability of claims 1 and 12, but notes that the other of these pending claims are patentable over Ishii for at least the same reasons that claims 1 and 12 are.

Both claims 1 and 12 are now limited to 1) the wafer resting on an inner top surface of the bottom of the wafer lifter that is *parallel to* an outer bottom surface of the bottom of the wafer lifter; and, 2) the inner top surface and the outer bottom surface of the bottom of the wafer lifter being *perpendicular to* the sidewalls of the wafer lifter that define the first diameter greater than the diameter of the wafer.

Support for these amendments are found in the patent application as filed at least in FIGs. 4A and 4B. The wafer 320 is shown as resting on an inner top surface of the wafer lifter 326 that is *parallel to* the outer bottom surface of the bottom of the wafer lifter. The outer bottom surface is the surface of the wafer lifter 326 that the reference number 326 directly points to. The inner top surface is the surface of the wafer lifter 326 that the wafer 320 directly rests on. Furthermore, the inner top surface and the outer bottom surface of the bottom of the wafer lifter 326 are perpendicular to the sidewalls of the wafer lifter 326. The sidewalls of the wafer lifter 326 are the sidewalls that the reference number 404 directly points to.

Applicant submits that Ishii in view of Taniguchi, Somekh, or Brors does not teach, disclose, or suggest such a semiconductor dry etching system having a wafer lifter to which

claims 1 and 12 are now limited. The Examiner relies specifically on Taniguchi, Somekh, and Brors as each teaching, disclosing, or suggesting a wafer lifter that is positioned at the top of the plasma chamber, having sidewalls defining a first diameter greater than a diameter of the wafer and a bottom having a hole therein defining a second diameter less than the first diameter and less than the diameter of the wafer, where the wafer is exposed from the bottom of the wafer lifer through the hole therein. Therefore, Applicant specifically discusses why neither Taniguchi, Somekh, or Brors teaches, discloses, or suggests 1) the wafer resting on an inner top surface of the bottom of the wafer lifter that is *parallel to* an outer bottom surface of the bottom of the wafer lifter; and, 2) the inner top surface and the outer bottom surface of the bottom of the wafer lifter being *perpendicular to* the sidewalls of the wafer lifter that define the first diameter greater than the diameter of the wafer, as to which claims 1 and 12 are now limited. Since Taniguchi, Somekh, and Brors do not teach, disclose, or suggestion these limitations, Ishii in view of any of these references does not render claims 1 and 12 obvious.

First, with respect to Taniguchi, the relevant figure is FIG. 1, in which the wafer 105 is shown resting on a bottom of the wafer lifter 111. However, the inner top surface of the wafer lifter 111 on which the wafer 105 directly rests is *not parallel* to the outer bottom surface of the wafer lifter 111, because the inner top surface of the wafer lifter 111 is angled downward towards the outer bottom surface thereof. Furthermore, the inner top surface of the wafer lifter 111, because it is angled downwards towards the outer bottom surface of the wafer lifter 111, is *not perpendicular* to the sidewalls of the wafer lifter 111. Therefore, Ishii in view of Taniguchi does not render claims 1 and 12 obvious.

Second, with respect to Somekh, the relevant figures are FIGs. 3C and 3D, in which the wafer 139 is resting on the bottom of the wafer lifter 76. As with Taniguchi, however, the inner top surface of the wafer lifter 76 on which the wafer 139 directly rests is *not parallel* to the outer bottom surface of the wafer lifter 76, because the inner top surface of the wafer lifter 76 is angled downwards towards the outer bottom surface thereof. Furthermore, the inner top surface of the

wafer lifter 76, because it is angled downwards towards the outer bottom surface of the wafer lifter 76, is *not perpendicular* to the sidewalls of the wafer lifter 76. Therefore, Ishii in view of Somekh does not render claims 1 and 12 obvious.

Third, and finally, with respect to Brors, the relevant figure is FIG. 14, in which the wafer 232 is resting on the bottom of the wafer lifter 234. The inner top surface and the outer bottom surface of the bottom of the wafer lifter 234 are parallel to one another in Brors. However, the entire bottom of the wafer lifter 234 (including its inner top surface and its outer bottom surface) is angled upwards as compared to the sidewalls of the wafer lifter 234. Therefore, the inner top surface and the outer bottom surface of the bottom of the wafer lifter 234 are *not perpendicular* to the sidewalls of the wafer lifter 234. Therefore, Ishii in view of Brors does not render claims 1 and 12 obvious.

Claim 9 as to Ishii in view of another reference and further in view of Uchida or Ishii 2

Claim 9 has been rejected under 35 USC 103(a) as being unpatentable over Ishii in view of Taniguchi, Somekh, or Brors, and further in view of Uchida (5,804,027) or "Ishii 2" (5,795,429). Claim 9 is a dependent claim ultimately depending from independent claim 1, however, and therefore is patentable for at least the same reasons that claim 1 is patentable, as has been discussed above.

Claims 10 and 18 as to Ishii in view of another reference and further in view of APA

Claims 10 and 18 have been rejected under 35 USC 103(a) as being unpatentable over Ishii in view of Taniguchi, Somekh, or Brors, and further in view of Admitted Prior Art (APA). Claim 10 is a dependent claim ultimately depending from independent claim 1, whereas claim 18 is a dependent claim ultimately depending from independent claim 12. Therefore, claims 10 and 18 are patentable for at least the same reasons that claims 1 and 12 are, as has been discussed above.

Claims 1, 3-5, 7-8, 11-13, 15-17, and 19 as to APA in view of Ishii and another reference

Claims 1, 3-5, 7-8, 11-13, 15-17, and 19 have been rejected under 35 USC 103(a) as being unpatentable over Admitted Prior Art (APA) in view of Ishii and Taniguchi, Somekh, or Brors. As before, the Examiner relies specifically on Taniguchi, Somekh, and Brors as each teaching, disclosing, or suggesting a wafer lifter that is positioned at the top of the plasma chamber, having sidewalls defining a first diameter greater than a diameter of the wafer and a bottom having a hole therein defining a second diameter less than the first diameter and less than the diameter of the wafer, where the wafer is exposed from the bottom of the wafer lifer through the hole therein. However, as has been discussed, neither Taniguchi, Somekh, or Brors teaches, discloses, or suggests 1) the wafer resting on an inner top surface of the bottom of the wafer lifter that is *parallel to* an outer bottom surface of the bottom of the wafer lifter; and, 2) the inner top surface and the outer bottom surface of the bottom of the wafer lifter being *perpendicular to* the sidewalls of the wafer lifter that define the first diameter greater than the diameter of the wafer, as to which these claims are now limited (either directly or dependently). Since Taniguchi, Somekh, and Brors do not teach, disclose, or suggestion these limitations, APA-in view of Ishii and any of these references does not render these claims obvious.

Claim 9 as to APA in view of Ishii and another reference and further in view of Uchida or Ishii 2

Claim 9 has been rejected under 35 USC 103(a) as being unpatentable over APA in view of Ishii and Taniguchi, Somekh, or Brors, and further in view of Uchida or Ishii 2. Claim 9 is a dependent claim ultimately depending from independent claim 1, however, and therefore is patentable for at least the same reasons that claim 1 is patentable, as has been discussed above.

Conclusion

Applicant has made a diligent effort to place the pending claims in condition for allowance, and request that they so be allowed. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Randy Tung, Applicants' Attorney, at 248-540-4040, so that such issues may be resolved as expeditiously as possible. For these reasons, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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